

REMARKS

The Office Action dated November 30, 2006, has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 1-31 are currently pending in the application, of which claims 1, 10, and 21 are independent claims. Claims 1-2, 7, 9-13, 16, and 18-20 have been amended, and claims 21-31 have been added, to more particularly point out and distinctly claim the invention. No new matter has been added. Claims 1-31 are respectfully submitted for consideration.

Claims 1 and 10 were rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,785,252 of Zimmerman et al. ("Zimmerman"). Applicant respectfully submits that claims 1 and 10 recite subject matter that is neither disclosed nor suggested by Zimmerman.

Claim 1, upon which claims 2-9 depend, is directed to a method including estimating traffic in an uplink. The method also includes allocating uplink resources based on said estimating. The estimating is performed immediately following the transmission of a signal in a downlink.

Claim 10, upon which claims 11-20 depend, is directed to a communication system including estimating means for estimating traffic in an uplink. The communication means also includes uplink allocation resource means for allocating uplink resources based on said estimating means. The estimating means is configured to

estimate traffic in the uplink immediately following the transmission of a signal in a downlink.

Applicant respectfully submits that Zimmerman fails to disclose or suggest all of the elements of any of the presently pending claims.

Zimmerman is directed to a method and apparatus for a self-correcting bandwidth request/grant protocol in a wireless communication system. In Zimmerman allocation of resources is partly based on a Round Robin algorithm, as described at column 24, line 24. In the Round Robin scheme, some connections may not receive bandwidth, and thus, implicitly, do not communicate, as described at column 24, lines 22-24. Additionally, Zimmerman states that an uplink traffic estimation is performed “to allocate uplink bandwidth to the CPEs, at column 24, lines 26-29. Zimmerman further indicates the allocation of uplink bandwidth should precede allocation of downlink bandwidth at column 24, lines 41-44. Thus, Zimmerman describes that data traffic is estimated based on the bandwidth requests received from the CPEs and based on an observation of actual data traffic, as described at column 24, lines 64-67. Accordingly, Zimmerman allocates uplink capacity prior to beginning downlink, because Zimmerman does not link unless sufficient bandwidth is available, and Zimmerman performs uplink bandwidth allocation prior to downlink bandwidth allocation.

Claims 1 recites “wherein the estimating is performed immediately following the transmission of a signal in a downlink,” and claim 10 recites “wherein the estimating means is configured to estimate traffic in the uplink immediately following the

transmission of a signal in a downlink.” These limitations are not disclosed or suggested by Zimmerman. Instead, as explained above, Zimmerman directs that the allocation of uplink bandwidth is performed before the allocation of downlink bandwidth, and that allocation of resources precedes transmission, as explained at column 24, lines 15-67 of Zimmerman.

The Office Action took the position that “wherein the estimating is performed following the transmission of a signal in the downlink” is disclosed by the polling signals in Zimmerman. Applicant respectfully disagrees.

It is definitively stated in column 22, line 36-44, of Zimmerman that “Rather than check the queue status directly, the base station preferably receives requests for bandwidth from the CPEs using the techniques described above with reference Figs 3-11. Using these bandwidth requests, the base station reconstructs a logical picture of the state of the CPE data queues. Based on this logical view of the set of queues, the base station allocates uplink bandwidth.”

Thus, the allocation of uplink bandwidth in Zimmerman is performed following a signal (the request) from the CPE to the base station in Zimmerman, *i.e.* following an uplink signal. This is clearly distinguishable from the recitation of claim 1 that the estimation is performed immediately following the transmission of a signal in the downlink. The words of claims must be construed as broadly as reasonable, but construing the claimed “downlink” to cover uplink signals would not be reasonable.

In the Response to Arguments section, the Office Action clarified that “following the transmission of a signal in a downlink,” was being interpreted very broadly to mean that as long as any signal was ever sent in the downlink direction prior to the estimation, the limitation “following the transmission of a signal in a downlink” was met. In order to clarify what is claimed, the word “immediately,” has been recited, which should clarify that the polling signal of Zimmerman does not provide a basis upon which to meet the limitation “immediately following the transmission of a signal in a downlink.”

In the Response to Arguments section, the Office Action also took the position that the “wherein” clause “does not have to be treated.” Applicant strongly disagrees with the Office Action’s position. It is axiomatic that anticipation of a claim under 35 U.S.C. §102 can be found only if the prior art reference discloses every element of the claim. *See In re King*, 801 F.2d 1324, 1326, 231 USPQ 136, 138 (Fed. Cir. 1986) and *Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 1458, 221 USPQ 481, 485 (Fed. Cir. 1984). Indeed, in interpreting a claim every term of the claim must be considered. *Bicon Inc. v. Straumann Co.*, 78 USPQ2d 1267, 1272 (Fed. Cir. 2006). *See, e.g., Elekta Instrument S.A. v. O.U.R. Scientific Int’l, Inc.*, 214 F.3d 1302, 1305, 1307 (Fed. Cir. 2000). Thus, every limitation of the claim must be considered, even if it is not positively recited. *In re Danly*, 263 F.2d 844, 847 (CCPA 1959). Accordingly, the Office Action is not legally permitted to fail to treat elements of the claim, even when they are, as the Office action asserted, “functional.” This is especially true with regard to claim 1, which claims a method, and claim 10, which

expresses an apparatus in means-plus-function language, as authorized by 35 U.S.C. 112, sixth paragraph.

Accordingly, for each of the reasons provided above, it is respectfully requested that the rejection of claims 1 and 10 be withdrawn.

The rejection of the dependent claims 2-9 and 11-20, discussed below, was essentially the same as before, and is discussed below. As a general matter, however, the Office Action failed to address the arguments that had been presented regarding the dependent claims. Instead, at page 11 of the Office Action, the Office Action took the position that claims 2-9 and 11-20 were rejected “due to their dependency on their respective independent claims.” This basis for rejection is clearly improper. A claim cannot be rejected simply because of its dependence on a rejected independent claim when the basis of the rejection of the independent claim is alleged prior art. Accordingly, the Office Action’s response in no way addresses the arguments set forth in the last Response to Office Action (the response filed August 21, 2006).

Claims 2 and 11 were rejected under 35 U.S.C. 103(a) as being unpatentable over Zimmerman in view of U.S. Patent Application Publication No. 2005/0013287 of Wallentin et al. (“Wallentin”). Applicant respectfully traverses this rejection.

Claims 2 and 11 depend respectively from, and further limit, claims 1 and 10. At least some of the deficiencies of Zimmerman with respect to claims 1 and 10 are discussed above. Wallentin fails to remedy the above-identified deficiencies of

Zimmerman, and consequently the combination of Zimmerman and Wallentin fails to disclose or suggest all of the elements of any of the presently pending claims.

Wallentin is directed to a method and arrangement for channel type switching. Wallentin aims to improve efficient use of radio network resources. In Wallentin, in some cases uplink requests can be delayed or suppressed if congestion is an issue. Accordingly, it is unsurprising that Wallentin fails to remedy the above-identified deficiencies of Zimmerman. Thus, the combination of Wallentin and Zimmerman fails to disclose or suggest all of the elements of claims 2 and 11, and it is respectfully requested that this rejection be withdrawn.

Additionally, one of ordinary skill in the art would not modify Zimmerman to change the order of Zimmerman's operations, because doing so would fundamentally alter Zimmerman's system.

The Office Action's combination of references was impermissible hindsight reconstruction, as described in MPEP 2145. To establish a *prima facie* case of obvious under 35 U.S.C. 103, it is essential that the Office Action provide some motivation or suggestion to make the claimed invention in light of the prior art teachings. *See, e.g., In re Brouwer*, 77 F.3d 422, 425, 37 USPQ2d 1663, 1666 (Fed. Cir. 1996) and MPEP 2144.08. The Office Action did not provide proper motivation to combine the references, and accordingly failed to provide a *prima facie* case for obviousness. As MPEP Section 2143.01 indicates, the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability

of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). Accordingly, for this additional reason, it is respectfully requested that this rejection be withdrawn.

MPEP 707.07(f) sets forth the Examiner's obligation to answer all material traversed. The Office Action fails to answer the arguments previously presented regarding this rejection, and consequently, there is no basis for maintaining the rejection.

Claims 3 and 12 were rejected under 35 U.S.C. 103(a) as being unpatentable over Zimmerman in view of Wallentin and further in view of U.S. Patent Publication No. 2004/01219917 of Love et al. ("Love"). Applicant respectfully traverses this rejection.

Claims 3 and 12 depend respectively from, and further limit, claims 1 and 10. At least some of the deficiencies of Zimmerman and Wallentin with respect to claims 1 and 10 are discussed above. Love fails to remedy the above-identified deficiencies of the combination of Zimmerman and Wallentin, and consequently the combination of Zimmerman, Wallentin, and Love fails to disclose or suggest all of the elements of any of the presently pending claims.

Zimmerman and Wallentin are discussed above. Love is directed to HARQ ACK/NAK coding for a communication device during soft handover. Love aims to improve HARQ ACK/NAK in such a way to obtain macro selection diversity benefit. Accordingly, it is unsurprising that Love fails to remedy the above-identified deficiencies of Zimmerman and Wallentin. Thus, the combination of Zimmerman,

Wallentin, and Love fails to disclose all of the elements of claims 3 and 12, and the rejection should be withdrawn.

Additionally, one of ordinary skill in the art would not modify Zimmerman to change the order of Zimmerman's operations, because doing so would fundamentally alter Zimmerman's system.

The Office Action's combination of references is impermissible hindsight reconstruction, as described in MPEP 2145, and explained above. Accordingly, it is respectfully requested that this rejection be withdrawn. As noted above, the Office Action failed to address all of the arguments previously presented regarding this rejection. Thus, there is no basis for maintaining the rejection.

Claims 4 and 13 were rejected under 35 U.S.C. 103(a) as being unpatentable over Zimmerman in view of Wallentin and further in view of U.S. Patent Application Publication No. 2005/0048985 of Haartsen ("Haartsen"). Applicant respectfully traverses this rejection.

Claims 4 and 13 depend respectively from, and further limit, claims 1 and 10. At least some of the deficiencies of Zimmerman and Wallentin with respect to claims 1 and 10 are discussed above. Haartsen fails to remedy the above-identified deficiencies of the combination of Zimmerman and Wallentin, and consequently the combination of Zimmerman, Wallentin, and Haartsen fails to disclose or suggest all of the elements of any of the presently pending claims.

Zimmerman and Wallentin are discussed above. Haartsen is directed to resource management and traffic control in time-division-duplex communication systems. Haartsen aims to solve the problems associated with previous TDD communication systems, and to provide support for asymmetric service in a TDD system having multi-radio units, smart resource allocation, and smart control of asymmetric traffic. Accordingly, it is unsurprising that Haartsen fails to remedy the above-identified deficiencies of Zimmerman. Thus, the combination of Zimmerman, Wallentin, and Haartsen fails to disclose or suggest all of the elements of claims 4 and 13, and should be withdrawn.

Additionally, one of ordinary skill in the art would not modify Zimmerman to change the order of Zimmerman's operations, because doing so would fundamentally alter Zimmerman's system.

The Office Action's combination of references is impermissible hindsight reconstruction, as described in MPEP 2145, and explained above. Accordingly, it is respectfully requested that this rejection be withdrawn. As noted above, the Office Action failed to address all of the arguments previously presented regarding this rejection. Thus, there is no basis for maintaining the rejection.

Claims 5 and 14 were rejected under 35 U.S.C. 103(a) as being unpatentable over Zimmerman in view of Love and further in view of U.S. Patent No. 6,697,378 of Patel ("Patel"). Applicant respectfully traverses this rejection.

Claims 5 and 14 depend respectively from, and further limit, claims 1 and 10. At least some of the deficiencies of Zimmerman and Love with respect to claims 1 and 10 are discussed above. Patel fails to remedy the above-identified deficiencies of the combination of Zimmerman and Love, and consequently the combination of Zimmerman, Love, and Patel fails to disclose or suggest all of the elements of any of the presently pending claims.

Zimmerman and Love are discussed above. Patel is directed to a method and apparatus for class-based transmission control of data connections based on real-time external feedback estimates obtained using messaging from a wireless network. Patel aims, among other things, to improve the overall throughput of a wireless voice/data network and to delay, prioritize, and exploit the latency requirements of various classes of traffic by artificially controlling the burstiness of data packet transmissions to maximize the use of available capacity in a particular cell (sector) in the wireless network. Accordingly, it is unsurprising that Patel fails to remedy the above-identified deficiencies of Zimmerman and Love. Thus, the combination of Zimmerman, Love, and Patel fails to disclose or suggest all of the elements of claims 5 and 14, and the rejection of claims 5 and 14 should be withdrawn.

Additionally, one of ordinary skill in the art would not modify Zimmerman to change the order of Zimmerman's operations, because doing so would fundamentally alter Zimmerman's system.

The Office Action's combination of references is impermissible hindsight reconstruction, as described in MPEP 2145, and explained above. Accordingly, it is respectfully requested that this rejection be withdrawn. As noted above, the Office Action failed to address all of the arguments previously presented regarding this rejection. Thus, there is no basis for maintaining the rejection.

Claims 6-7 and 15-16 were rejected under 35 U.S.C. 103(a) as being unpatentable over Zimmerman in view of Haartsen. Applicant respectfully traverses this rejection. Zimmerman and Haartsen are discussed above.

Claims 6-7 and 15-16 depend respectively from, and further limit, claims 1 and 10. At least some of the deficiencies of Zimmerman and Haartsen with respect to claim 1 and 10 are discussed above. Because Haartsen fails to remedy the above-identified deficiencies of Zimmerman, the combination of Zimmerman and Haartsen fails to disclose or suggest all of the elements of any of the presently pending claims.

Additionally, one of ordinary skill in the art would not modify Zimmerman to change the order of Zimmerman's operations, because doing so would fundamentally alter Zimmerman's system.

The Office Action's combination of references is impermissible hindsight reconstruction, as described in MPEP 2145, and explained above. Accordingly, it is respectfully requested that this rejection be withdrawn. As noted above, the Office Action failed to address all of the arguments previously presented regarding this rejection. Thus, there is no basis for maintaining the rejection.

Claims 8-9 and 17-18 were rejected under 35 U.S.C. 103(a) as being unpatentable over Zimmerman in view of Haartsen and further in view of Patel. Applicant respectfully traverses this rejection.

Claims 8-9 and 17-18 depend respectively from, and further limit, claims 1 and 10. At least some of the deficiencies of Zimmerman, Haartsen, and Patel with respect to claims 1 and 10 are discussed above. Because Haartsen and Patel fail to remedy the above-identified deficiencies of Zimmerman, the combination of Zimmerman, Haartsen, and Patel fails to disclose or suggest all of the elements of any of the presently pending claims.

Additionally, one of ordinary skill in the art would not modify Zimmerman to change the order of Zimmerman's operations, because doing so would fundamentally alter Zimmerman's system.

The Office Action's combination of references is impermissible hindsight reconstruction, as described in MPEP 2145, and explained above. Accordingly, it is respectfully requested that this rejection be withdrawn. As noted above, the Office Action failed to address all of the arguments previously presented regarding this rejection. Thus, there is no basis for maintaining the rejection.

Claim 19 was rejected under 35 U.S.C. 103(a) as being unpatentable over Zimmerman in view of U.S. Patent No. 6,868,273 of Cave ("Cave"). Applicant respectfully traverses this rejection.

Claim 19 depends from and further limits 10. At least some of the deficiencies of Zimmerman with respect to claim 10 are discussed above. Cave fails to remedy the above-identified deficiencies of Zimmerman, and consequently the combination of Zimmerman and Cave fails to disclose or suggest all of the elements of any of the presently pending claims.

Zimmerman is discussed above. Cave is directed to signaling connection admission control in a wireless network. Cave aims to provide a method to determine whether a user equipment should be admitted for control plane signaling, and, if so, whether the user equipment should be admitted for signaling over common resources or dedicated resources. Accordingly, it is unsurprising that Cave fails to remedy the above-identified deficiencies of Zimmerman. Thus, the combination of Zimmerman and Cave fails to disclose or suggest all of the elements of claim 19, and it is respectfully requested that the rejection of claim 19 be withdrawn.

Additionally, one of ordinary skill in the art would not modify Zimmerman to change the order of Zimmerman's operations, because doing so would fundamentally alter Zimmerman's system.

The Office Action's combination of references is impermissible hindsight reconstruction, as described in MPEP 2145, and explained above. Accordingly, it is respectfully requested that this rejection be withdrawn. As noted above, the Office Action failed to address all of the arguments previously presented regarding this rejection. Thus, there is no basis for maintaining the rejection.

Claim 20 was rejected under 35 U.S.C. 103(a) as being unpatentable over Zimmerman in view of Wallentin. Applicant respectfully traverses this rejection. Zimmerman and Wallentin are discussed above.

Claim 20 depends from and further limits claim 10. At least some of the deficiencies of Zimmerman and Wallentin with respect to claim 10 are discussed above. Because Wallentin fails to remedy the above-identified deficiencies of Zimmerman, the combination of Zimmerman and Wallentin fails to disclose or suggest all of the elements of claim 20, and the rejection of claim 20 should be withdrawn.

Additionally, one of ordinary skill in the art would not modify Zimmerman to change the order of Zimmerman's operations, because doing so would fundamentally alter Zimmerman's system.

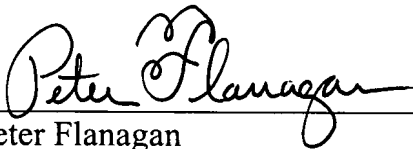
The Office Action's combination of references is impermissible hindsight reconstruction, as described in MPEP 2145, and explained above. Accordingly, it is respectfully requested that this rejection be withdrawn. As noted above, the Office Action failed to address all of the arguments previously presented regarding this rejection. Thus, there is no basis for maintaining the rejection.

For the reasons set forth above, it is respectfully submitted that references have been improperly combined, and the cited art fails to disclose or suggest all of the elements of any of claims 1-31, because each of claims 1-31 recites patentable subject matter. Thus, it is respectfully requested that all of claims 1-31 be allowed, and that this application be passed to issuance.

If, for any reason, the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, Applicant's undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, Applicant respectfully petitions for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



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Enclosures: Petition for Extension of Time
Additional Claim Fee Transmittal
Check No. 16429